

RANT, Zoran, prof., dr. ing

What is in reality a thermodynamic condition? Stroj vest 6 no.2:1-4
Mr '60. (EEAI 9:10)

1. Oddelek za strojnistvo Univerze v Ljubljani
(Thermodynamics)

YUGOSLAVIA / Physical Chemistry. Thermodynamics.
Thermochemistry. Equilibria. Phase
Changes. Physico-chemical Analysis.

B

Abs Jour : Ref Zhur - Khimiya, No 12, 1959, No. 41547

Author : Rant, Z.

Inst : Slovakian Chemical Society

Title : Exergy, Reaction Enthalpy and Free
Enthalpy

Orig Pub : Vest. Slov. kem. društva, 1957, 4,
No 1-2, 49-56

Abstract : The ability of energy to transform into
work is denoted as exergy (Ex). Ex
magnitude corresponds to the maximum work
possible when the energy is transformed
into work in a reversible process.

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YUGOSLAVIA / Physical Chemistry. Thermodynamics.
Thermochemistry. Equilibris. Phase
Changes. Physico-chemical Analysis.

Abs Jour : Ref Zhur - Khimiya, No 12, 1959, No. 41547

If the process is conducted between the temperatures T and T_0 , $Ex = Q(T - T_0)/T$, where Q denotes heat lost during the process. For mechanical, chemical, thermal and other processes, $Ex = I_1 - I_0 - T_0(S_1 - S_0)$, where I is enthalpy and S is entropy of the system. The exergy efficiency coefficient is equal to: $\xi = Ex_2/Ex_1$, where Ex_1 and Ex_2 are the initial and final exergies of the process. ξ indicates the extent of reversibility of the process and characterizes process yield better than

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RANTZ

Distr: 4E3d

Jc ✓ Graphical determination of the exergy loss in heat transfer
Gerrit Rant (Univ. Ljubljana, Yugoslavia). *Allgem. Wärmetech.* 1, 141-2 (1957).—While the term energy designates the amt. of work with which a substance or material is inherently endowed to give useful work, the new term exergy is applied for just that amt. of work which could be extd. from the former to result in useful work and is called "tech. working capacity." Its math. expression is the following: In the heat transfer between the temps. T_1 and T_2 ($T_1 > T_2$) a loss of exergy (ΔE_x) is incurred which cannot be recovered: $\Delta E_x = Q((T_1 - T_0)/T_1 - (T_1 - T_0)/T_2) = Q((T_0/T_1) - (T_0/T_2))$, where T_0 is the (abs.) surrounding temp. and Q the heat. A diagram is developed which gives this loss directly. M. Hirstenheim

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K

RANT, Z.

Thermoelectric-power plant in Sostanj. p. 79

STROJNISKI VZETNIK. (Fakulteta za elektrotehniko in strojninstvo Univerze v Ljubljani, Institut za turbostroje v Ljubljani, Drustvo strojnih inženirjev in tehnikov LR Slovenije in Strojna industrija Slovenije) Ljubljana.
Vol. 3, no. 4/5, Sept. 1957.

Monthly List of East European Accession (SNTI) LC, Vol. 8, no. 6, June 1959.

Uncl.

RANT, Z.

Kooling tower in the thermolectric-power plant in Postojna, p. 95.

STRJAVSKI VESTNIK. (Fakulteta za elektrotehniko in strojništvo Univerze v Ljubljani, Institut za turbostroje v Ljubljani, Drustvo strojnih inženirjev in tehnikov LR Slovenija in Strojna industrija Slovenije) Ljubljana.

Vol. 3, no. 4/5, Sept. 1957.

Monthly List of East European Accession (EMI) 1C, Vol. 8, no. 6, June 1954.

Uncl.

RANT, N.

First and second principal theorems of thermodynamics, p. 57.

STROJNISKE VESTNIK (Fakulteta za elektrotehniko in strojnistvo Univerze v Ljubljani Institut za turbostroje v Ljubljana Drustvo strojnih inženirjev in tehnikov LR Slovenije in Storjna industrija Slovenije) Ljubljana, Yugoslavia.
Vol. 4, no. 3/4, June 1958

Monthly List of East European Accession EEA) IC, Vol. 8, no. 6, June 1959
Unclassified

RANTO, Ladislav, inz.; SKVARKA, Peter, inz.

Experiences in the operation of a new 190 g-cal heat exchange station in the Bratislava II Electric Power Plant, Energetika Cz 14 no.12:603-604 D '64.

1. Elektraren Bratislava II.

MOCHUL'SKAYA, Yu.Ch.; SEMENYAK, B.I.; Prinimali uchastiye: PUGACHEVA, L.V.;
RANTSEVA, M.I.; KUZNETSOVA, M.I.; TETERINA, N.N.; SABUROVA, I.M.

Dressing of kainite-langebeinite ores of the Stebnik ore
deposit. Khim.prom. no.6:454-456 Je '62. (MIKA 15:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut galurgii i
L'vovskiy filial Gosudarstvennogo soyuznogo instituta po proyektiro-
vaniyu predpriyatiy gornokhimicheskoy promyshlennosti.
(Ore dressing)

RUMYANTSEV, V. I. SARKISOV, R. V.
1966-1970. Pechatnoye izdatelstvo
1, Institut geografii AN SSSR, Moskva.

S/010/60/000/005/001/001/XX
A053/A130

AUTHOR: Rantsman, Ye. Ya.

TITLE: Geomorphological questions concerning the Garm region of Tadzhikistan and its seismic origin

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya geograficheskaya, no. 5, 1960.
82 - 87

TEXT: The Garm region of Tadzhikistan has the highest annual record of earthquakes of all places in the USSR. Seismographic exploration has been conducted by the Tadzhikistan complex seismological expedition (TKSE) of the Institut fiziki zemli AN SSSR (Institute of Physics of the Earth of the USSR Academy of Sciences) and the Seismological Department of the Academy of Sciences of Tadzhikistan SSR. The article reports on certain results of the studies concerning quaternary tectonics of the Garm region by means of geomorphological analysis of the material gathered during field investigations in 1955 - 1956, conducted by the Institut geografii AN SSR (Geographic Institute of the USSR Academy of Sciences) under the supervision of I. P. Gerasimov. The Garm region is located in the western part of the Pamiro-Alay in the zone of two large mountain formations of

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S/010/60/000/005/001/001/XX

A053/A130

Geomorphological questions...

the southern Tyan'-Shan' and the Pamir, consisting of the Alay ridge and the Peter the 1st ridge; between the two is the narrow valley of the Surkhob river. The Transalay ridge and the Peter 1st ridge originated in the Mesozoic-Cenozoic era and consists of accumulated sedimentary rock up to an altitude of 10,000 m. The author cites various theories as to the origin of the formations as developed by Gubin, 1955, Gzovskiy, Krestnikov, Nersevov and Reysner, 1958, with which the author disagrees in view of the conclusions drawn by him from the data of the geomorphological analysis. The author distinguishes between two stages of development, before and after glaciation. In the Pamiro-Alay there are sections where the early quaternary surface of denudation is covered by moraine and fluvio-glacial deposits of the penultimate glaciation. Consequently the disintegration of the Alay foothills and the Transalay ridges started in the interglacial period. In the Peter 1st ridge there are no such traces of the penultimate glaciation and therefore in the territories of the Pamiro-Alay which developed identically it can be presumed, that the surface of denudation of the Peter 1st ridge also started disintegrating in the interglacial period. According to a rough estimate the formation of valleys in the preglacial and interglacial period occurred to a depth of 600 m. The author describes the way in which he determines the depth of disintegration of the Alay ridge. The stage of disintegration of the surface can

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A053/A130

Geomorphological questions...

also be determined in other parts of the ridge, not touched by glaciation, by the formation of so-called bench surfaces. The depth of the interglacial break-up (from the surface of the denudation to the bench surfaces) attains 700 - 900 m in the eastern part of the Peter 1st ridge, in the western 400 and in the central part 200 m, the differences in depth being created by the differentiation of the vertical movements along transversal as well as longitudinal breaks. The size of the postglacial cuts in the Alay ridge is determined by the cuts in the alluvium, corresponding with last glaciation. These cuts vary in size depending on whether they are located up or down stream of such rivers as the Surkhoba, the Koksu, the Yarkhych. The depths of the postglacial cuts along the valleys of the tributaries of the Surkhoba river increase up to 120 m. The even level of the bench stretching on the northern slope of the Peter 1st ridge at an altitude of 250 - 300 m indicates that the rising of the cis-Surkhob part of the ridge during the Holocene was more or less equal extending over the entire length of the northern slope of the ridge, transforming the river valleys in deep, narrow erosional canyons. Thus, in the interglacial age the eastern and central part of the Peter 1st ridge grew at a similar speed as the rising of the Alay ridge, whereas during the Holocene the speed of growth of the Peter 1st ridge exceeded that of the Alay ridge and had the greatest rate of growth of the entire quaternary period (rising at 250 m

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A053/A130

Geomorphological questions...

per 10,000 years). A map enclosed thus shows by comparison between the seismic state and the quaternary tectonics the relationship which exists between seismic events and the peculiarities of movements during the Holocene. For clarification of the peculiarities of the Garm region, which distinguish the Garm region from other similar regions, it should be borne in mind that 1) the southern part (Peter 1st ridge) of the region only took part in the rise, which forms the mountain relief, during the interglacial period, while the remainder of the Pamiro-Alay is of Neogenic growth; 2) the fastest rise was attained by the Peter 1st ridge in the Holocene, exceeding by far the speed of growth of mountains located directly to the North, thereby creating a narrow zone (Surkhob zone) of vastly different tectonic movements. There is one map and 5 Soviet references.

ASSOCIATION: Institut Geografii AN SSSR (Institute of Geography of the USSR Academy of Sciences)

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8/010/60/000/005/001/001/XX
A053/A130

Geomorphological questions...

Comparison between quaternary tectonics and seismic state of Garm region.
Data on seismic activity obtained by the TKSE during 1955 - 56.

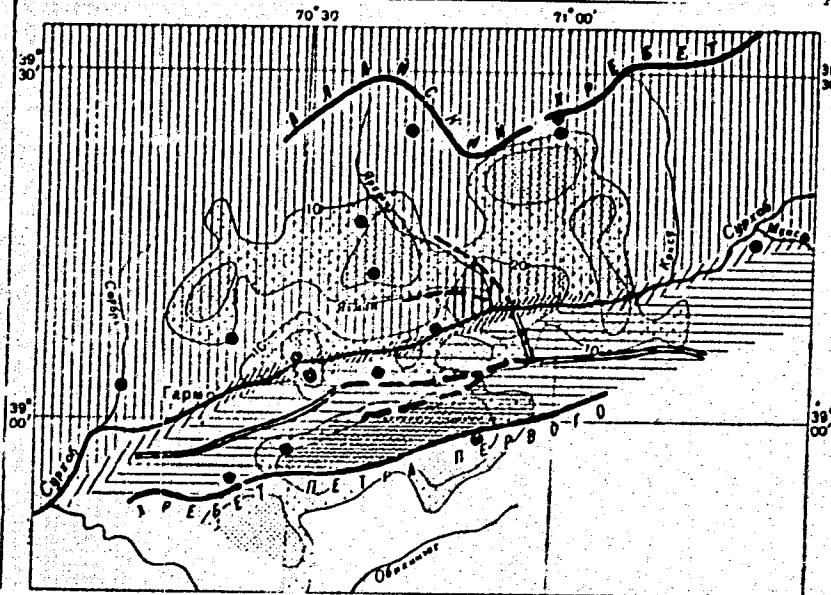
1) Isolines of seismic activities in accordance with earthquakes of 7-9 categories
2) Epicenters of quakes of highest categories. 3) Seismically active territories
4) Seismically most active territories. Northern zone of Pamiro-Alay (beginning Neogenic growth). 5) Region of intense quaternary rises. 6) Section of relative subsidence during Holocene. Southern zone of Pamiro-Alay (beginning of rise-midquaternary period), levels of rise of early quaternary surface of denudation
7) - up to 3,800 - 4,500 m; 8) - up to 2,800 - 3,800 m; 9) up to 2,200 - 2,800 m
10) Surknob zone of greatly different Holocene movements. 11) Same with less different movements. 12) Ruptures a) movements taking place to this date; b) movements took place until last glaciation, v) movements take place in the Holocene.



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S/010/60/000/005/001/001/XX
A053/A130

Geomorphological questions...



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RANTS MAN, Ye.Ya.

Geomorphology and seismicity of the Surkhob Valley. Dokl. AN SSSR
124 no.1:171 Ja '59. (MIRA 12:1)

1. Predstavleno ekademikom I.P. Gerasimovym,
(Surkhob Valley--Earthquakes)
(Surkhob Valley--Physical geography)

Category: USSR / Physical Chemistry - Crystals

B-5

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 29675

Author : Zhdanov G. S., Zvonkova Z. V., Rannev N. V.

Inst : not given

Title : X-Ray Diffraction Study of Diethyl-Dithiocarbamate of Lead

Orig Pub: Kristallografiya, 1956, 1, No 5, 514-519

Abstract: Monocrystals of $[(C_2H_5)_2NCS]Pb$ were obtained in the form of colorless hexagonal prisms. X-ray determinations were made of the parameters of monoclinic lattice: a 9.55, b 11.75, c 14.72 Å, $\beta = 96^\circ$, Z = 4, F. gr. P2₁/c. By means of F₁ series pyramidal configuration of Pb-S bonds (tetragonal pyramid) was ascertained. From projection of electron density (100) and (010) the coordinates of Pb, S atoms were obtained. Interatomic distances in the pyramidal complex: Pb-S 2.7-2.8, S-S 3.3-3.5, Pb-Pb 4.25 Å. Pb-S bonds are of predominantly covalent nature. Structural data are compared with change in dipole moments in the series of dithiocarbamates of Zn, Ni, Pb, Bi.

Card : 1/1

-14-

RANSKIY, B.N.

Incorrectness of analysis according to the All-Union State Standards
no. 2082-51. Zav. lab 22 no. 9:1130-1134 '56. (MLR 9:12)

1. Machal'nik otdela tekhnicheskogo kontrolya Balkhashskogo medoplavil'-
nogo zavoda.
(Molybdenum--Analysis)

RANT, Joze, Prof. dr.

60th Anniversary of prof. dr. Franc Hribar. Zobozdrav. vest.,
Ljubljana 10 no.1-2:1-ii 1955.

(BIOGRAPHIES,
Hribar, F.)

RANT, Joze, prof. dr.

Orthodontics in the relation to prosthetics. Zobozdrav. vest.,
Ljubljana 9 no.4-6:188-195 1954.

1. Referat na strokovnem sestanku Drustva zobozdravstvenih delavcev
Slovenije septembra 1954.
(ORTHODONTICS
relation to prosthetics)

RANT, Jozef

RANT, Jozef, dr.

The significance of the contact point in orthodontics. Zdrav. vest., Ljubljana 9 no.1-2:19-22 1954.

(TEETH

*contact point)

RANT, Jose

RANT, Jcze, prof. dr.

Diagnosis and treatment of prognathia in deciduous teeth. Zobozdrav.
vest., Ljubljana 9 no.1-2:47-53 1954.

(MANDIBLE, abnorm.

*prognathism, diag. & ther. in child.)

(ABNORMALITIES

*prognathism, diag. & ther. in child.)

RANT, Joze

RANT, Joze, dr.

The dentist's professional responsibility. Zobozdrav. vest.,
Ljubljana 9 no.1-2:23-30 1954.
(LEGISLATION, DENTAL
*Yugosl.)

RANT, J.

Yugoslavia (430)

Technology

A New type of mountain climbing shoe. p. 235, Nova Proizvodnja, Vol. 2, no. 2/4, August 1951.

East European Accessions List, Library of Congress, Vol. 2, no. 3, March 1953.

UNCLASSIFIED.

RANT, J.

Yugoslavia (430)

Technology

Novelties of the shoe and leather exhibition in London. p. 228, Nova Proizvodnja, Vol. 2, no. 2/4, August 1951.

East European Accessions List, Library of Congress, Vol. 2, No. 3, March 1953.
UNCLASSIFIED.

RANT

7
Energy, enthalpy of reaction, and free enthalpy. - Z. Rant
(Univ. Ljubljana, Yugoslavia). Veitnik : sloven. državna
državna 4, 49-50(1957)(in German). - The relation between
free enthalpy ($G = I - TS$) and the term called "exergy",
(in German: Exergie), defined earlier by the author (Forsch.
Gebiete Ingenieurw. 22, 38(1956)) as the reversible work of a
cyclic process between temp. T and T_0 involving a quantity
of heat Q , i.e., $E_{rx} = Q(T - T_0/T)$, is discussed. As a
measure of the reversibility of a chem. reaction the term
"grade of efficiency", was defined as $\epsilon = E_{rx}/E_{rx}$, and its practical
application in calcg. energy balances of chem. reactions
is illustrated on the wet and dry calcination reaction of
NaHCO₃. - N. Pavlik.

JW

1/1

99

RANT, ZORAN

RANT, ZORAN. Energetska ocenitev postrojka fabrikacije soje (No:CC₂).
Ljubljana, Tehniška visoka šola v Ljubljani, 1951. 71 p.
(Acta technica, 3, 1951. Skupina za strojništvo, 1)

(English and German summaries. bibl., graphs, tables)

So: MONTHLY LIST OF EAST EUROPEAN ACCESIONS, (FEAL), LC, Vol. 4, no. 9,
Sept. 1955, Uncl.

RANTA, Kosti.

"No place for selfishness and suspicion." Vsem.prof.dvizh.
no.10:26 0 '56. (MLRA 9:11)
(Trade unions)

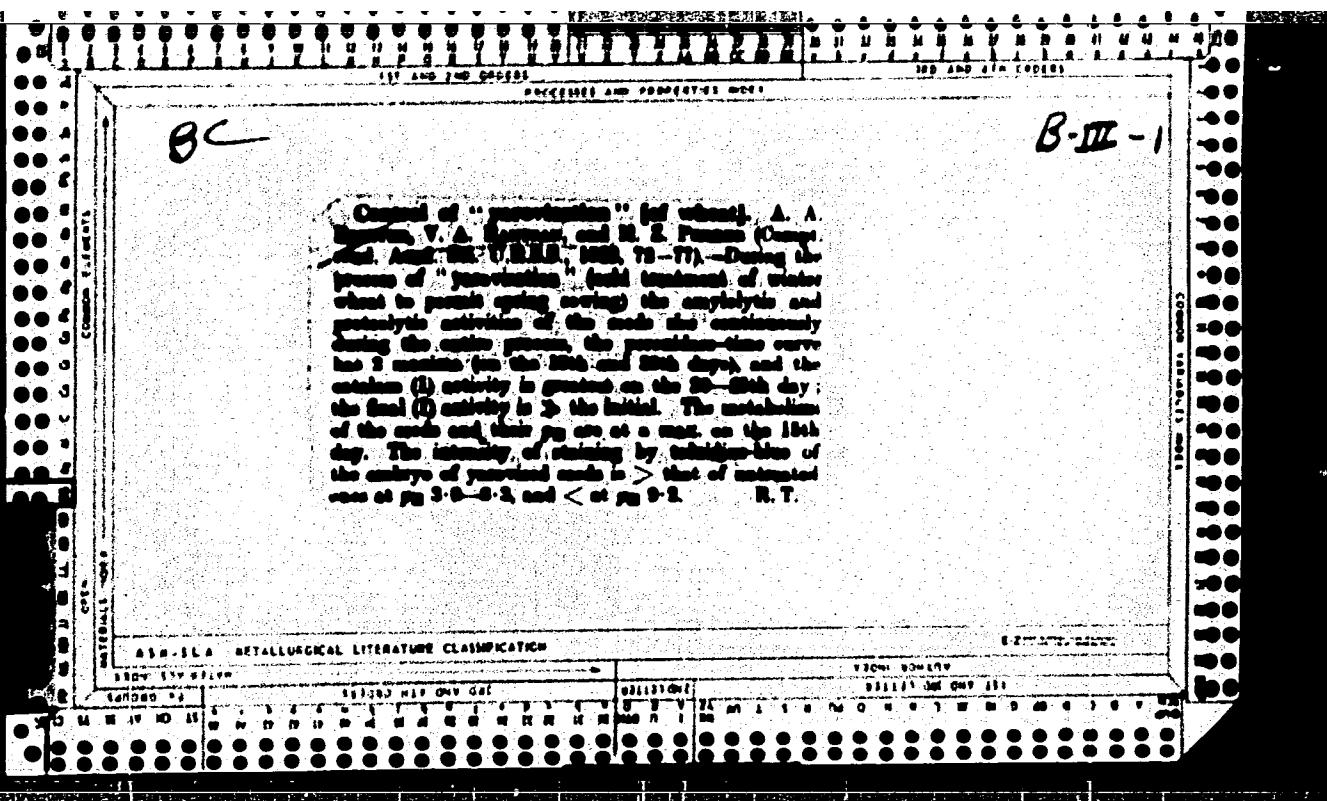
MATVEYEVA, Rakel; VISKARI, Eyne; FORSMAN, Khel'ga; RANTAHEN, Astrid;
SALMI, Khil'ya; TERVONEN, Lidiya; KHEGLUND, Lempi; KURKI, Mariya;
IEMPINEN, Khanna; RUKHKANEN, Kyullikki; MANNILA, An'ya; PUTTOHEN,
Katri.

For the common good. Rabotnitsa 36 no.8:22 Ag '58. (MIRA 11:9)
(Russia--Description and travel)

RANTIAN, G. N.

G. N. Rantian. (Letters to the Editor) Uniformity of designations in colorimetry. P. 597.

SO: Journal of Technical Physics, Vol. XXI, No. 5, May 1951



VOYEVODA, Dmitriy Kondrat'yevich, kandidat tekhnicheskikh nauk;
HANTSEV, A.A., redaktor; NIKOLAYEVA, I.I., redaktor; KARASIE,
M.P., tekhnicheskiy redaktor

[Choosing the methods of mechanization for sorting logs at
loading points] Vybor sredstv mekhanizatsii dlia sortirovki
drevesiny na nizhnikh lesnykh skladakh. Moskva, Goslesbu-
mizdat, 1955. 81 p.

(MLRA 8:11)

(Lumber--Transportation)

VORONITSYN, K.I.; RANTSEV, A.A., red.

[Central Scientific Research Institute for Mechanization and Power Engineering in the Forest Industry] TSentral'nyi nauchno-issledovatel'skii institut mekhanizatsii i energetiki lesnoi promyshlennosti. [n.p.] M-vo lesnoi promyshl., SSSR., 1957. 7 p.
(MIRA 11:11)

1. Direktor TSentral'nogo nauchno-issledovatel'skogo instituta mekhanizatsii i energetiki lesnoy promyshlennosti (TsNIIME)(for Voronitsyn).

(Lumbering)

ZOTOV, G.A., ROKHLENKO, D.B.; RANTSEV, A.A., red.

[Krestets logging camp of the Central Scientific Research Institute
for Mechanization and Power Engineering in the Forest Industry]
Krestetskii lespromkhoz TsNIIME. [N.p.] M-vo lesnoi promyshl.
RSFSR, 1957. 20 p. (MIRA 11:11)
(Krestets--Lumbering)

ABOL', I.P., ALYAB'YEV, V.I., RANTSEV, A.A.; TSAREV, B.S.; KRASHEVSKIY,
V.V., red.; FEDOROV, B.M., red. izd-va; BACHURINA, A.M., tekhn. red..
VORONITSYN, K.I., red.

[Skidding timber by means of winches in the U.S.S.R.] Nazemnaya
trelyvka lesa lebedkami v SSSR. [Moskva] M-vo lesnoi promyshl.
SSSR, 1957, 33 p. (MIRA 11:11)

1. Direktor TSentral'nogo nauchno-issledovatel'skogo instituta
mekhanizatsii i energetiki lesnoy promyshlennosti (TsNIIME)(for
Voronitsyn).

(Lumbering)

BRANDT, Georgiy Georgiyevich [deceased]; MAZUR, Moisey Ven'yaminovich [deceased]; TAMARKIN, Mark L'vovich; BAMM, A.I., red.; ZOTOV, G.A., red.; PEYCH, N.N., red.; RANTSEV, A.A., red.; MOROZOVA, A.N., red.izd-va; KUZNETSова, A.I., tekhn.red.

[English-Russian timber dictionary] Anglo-russkii lesotekhnicheskii slovar'. Izd.l. Moskva, Goslesbumizdat, 1960. 414 p.
(MIRA 14:4)

(Lumbering--Dictionaries)
(English language--Dictionaries--Russia)

RANTS MAN, E. Ya.

USSR/ Geography Geology

Card : 1/1 Pub. 45 - 5/20

Authors : Rantsman, E. Ya.

Title : On the neo-tectonics of the Issyk-Kul'sk syncline and its surrounding mountains

Periodical : Izv. AN SSSR. Ser. geog. 4, 41 - 46, July - August 1954

Abstract : Geographical-geological data on the tectonic characteristics of the Issyk-Kul'sk syncline and the Tersk-Alatau mountains surrounding the syncline, Uzb-SSR. Five USSR references (1948 - 1953). Tables.

Institution : Acad. of Sc. USSR, Institute of Geography

Submitted :

RANTSMAN, Ye.Ya.

Relation of relief types of the Issyk-Kul Basin to the tectonic structures (Exemplified by the Dzhety-Oguz anticline). Trudy Inst.geog. no.60:45-54 '54. (MLRA 8:5)

(Issyk-Kul region--Physical geography) (Physical geography-- Issyk-Kul region)

KUSHEV, S.L.; OLYUNIN, V.N.; RANTSMAN, Ye.Ya.; FEDOROVICH, B.A.

"Problems of the geography of Kazakhstan," no. 1, 1956. Reviewed
by S.L. Kushev, V.N. Oliunin, E.IA. Rantsman, B.A. Fedorovich,
Izv.AN SSSR.Ser.geog. no.3:145-148 My-Je '56. (MLRA 9:11)
(Kazakhstan--Geography--Periodicals)

RANTSMAN, Ye.Ya.

Types of relief of the mountainous framework of the Issyk-Kul Basin
in connection with the most recent structures. Trudy Inst.geog.no.67:
5-10 '56. (Issyk-Kul Basin--Physical geography) (MIRA 9:9)

RANTS MAN, Ye.Ya., kandidat geographicheskikh nauk.

Young age of the northern Tien Shan relief. Priroda 46 no.1:92-95
Ja '57.

1. Institut geografii Akademii nauk SSSR, Moskva.
(Tien Shan--Geology, Stratigraphic)

Rantsman, Ye. Ya.

AUTHOR: Rantsman, Ye. Ya.

10 56-2.8/39

TITLE: To the Problem of the Noncoincidence of Alpine and Neotectonic Structures in the Trans-Alay Range (K voprosu o nesoypadenii al'piyskikh i neotektonicheskikh struktur v zaalayskom khrebole)

PERIODICAL: Izvestiya Akademii nauk - Seriya geograficheskaya, 1958, Nr 2, pp 73-75 (USSR)

ABSTRACT: K.K. Markov, Obruchev (1951) and Gerasimov (1955) raised the question of the extent to which the basic orographic lines of the Pamir coincide with the course of basic alpine structures and devoted their research work to this problem, which in 1955 was the subject of geomorphological research carried out in the Trans-Alay Range. As a result, it has been established that the formation of the present relief of the Trans-Alay Range only started at the end of the Neogenic period. A sharp intensification of tectonic activity in the Pamir at that time has been noted by a number of scientists especially with regard to the consolidation of the sediments in the zones of accumulation during the end of the Neogenic and the beginning of the Quaternary period. Consequently, in the district of the Kyzylart Pass, the orographic axis of the Trans-Alay Range does not coincide with the course of the alpine structures, but follows the course of the neotectonic structures which - by the

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10-58-2-8/36

To the Problem of the Noncoincidence of Alpine and Neotectonic Structures
in the Trans-Alay Range

end of the Neogenic period - brought about the grand
elevation of the Trans-Alay Range.
There is one chart and 7 Soviet references.

ASSOCIATION: Institut geografii AN SSSR (Institute of Geography, of the
AS USSR)

1. Mountains--Characteristics 2. Mountains--Geography

Card 2/2

RANTS'MAN, Yelizaveta Yakovlevna; GERASIMOV, I.P., akademik, otv.red.;
SENILOVA, M.N., red. Tzernova; DOROKHINA, I.N., tekhn.red.

[Geomorphology of the Issyk-Kul' Depression and its marginal
mountains] Geomorfologiya Issyk-Kul'skoi kotloviny i ee gornogo
obramleniya. Moskva, Izd-vo Akad.nauk SSSR, 1959. 86 p.

(MIRA 12:12)

(Issyk-Kul' Depression--Geology, Structural)

RANTSMAK, Ye.Ya.

Connection between the relief and the recent structures in the
northern Tien Shan. Trudy Inst. geog. 75:5-12 '59. (MIRA 13:12)
(Shilik Valley—Geology, Structural)

3(0)

AUTHOR:

Rantsman, Ye. Ya.

307/20-124-1-45/69

TITLE:

Geomorphology and Seismic Activity on the Surkhob River Valley
(Geomorfologiya i seysmichnost' doliny r. Surkhob)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 1, pp 171-174
(USSR)

ABSTRACT:

The one time Garmskaya oblast', in Tadzhikistan, is the most active seismic region in the USSR. It presents a most favorable area for learning the interdependence of relief, young tectonics, and seismic activity. In this area there are: a. many crustal seismic shocks, b. in the relief undeniable, visible expression of young tectonic movements, and c. good and complete data of seismic activity, obtained by the Tadzhikskaya kompleksnaya seysmologicheskaya ekspeditsiya (Tadzhik Seismologic Multipurpose Expedition). The Geographic Institute, Academy of Sciences, USSR, has carried out geomorphological research in this area under the leadership of I. P. Gerasimov. The almost latitudinally running Surkhob valley lies between the Gissarskiy Range and the Petr Pervyy Range. In this work, only the approximately 100 km-long section between the mouths of the Koksu and Sorbog Rivers is discussed.

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Geomorphology and Seismic Activity on the
Surkhob River Valley

SOV/20-124-1-49/69

Characteristic of the Surkhob Valley is a broad (up to 2 km wide) river bed, combined with a weak development of terraces. In general the river flows between high and steep banks. The right (Gissarskiy) wall of the valley is of Pre-Paleozoic and Paleozoic rock, the left of Mesozoic. A few small terraces are developed on the right side; they are morphologically weakly defined and are covered with debris washed down from the valley sides. The Surkhob Valley makes an almost straight line in the described section, looked at from a bend to the WSW near the mouth of the Yarkhych. Single sections of the valley distinguish themselves through specific structures:
I. from the Koks River to the Yarkhych River, four terraces occur on the right side; II. from Yarkhych to the Nimichi settlement the terraces are missing; III. from Nimichi to the Yaldymych settlement there is a low alluvial terrace on the right side; IV. from Yaldymych to the mouth of the Sorbog the elevation of the last terrace gradually rises in the down-stream direction. Below the Garm settlement the valley broadens and terraces appear on both sides of the river (Fig 1). The number of earthquake centers on the right side is much greater.

Card 2/3

Geomorphology and Seismic Activity on the
Surkhot River Valley

SOV/20-124-1-49/69

than the number on the left (Fig 2) and to be sure is greatest in the area of section II. It was determined (Ref 5) that the morphologically different valley sections, I through IV, are also different in respect to the dislocations in the earthquake centers. From the foregoing it can be concluded that the seismic activity in the Surkhob Valley is not especially bound to the geologic structure (deep seated fault along the valley; Refs 1, 3, 4). It is more characteristic of younger movements (Holocene). It is not characterized by the intensity of the movements as such (south side), ~~but~~ by the contrast between them (sinking of the north side with the rising of the south side in section II). Also the differentiation of the activity (different relationships of single sections along the north side) has significance. There are 2 figures and 5 Soviet references.

PRESENTED: July 21, 1958, by I. P. Gerasimov, Academician

SUBMITTED: July 18, 1958

Card 3/3

RANTS MAN, Ye. Ya.

Some geomorphological problems regarding Garm District, Tajikistan
in connection with its seismic activity. Izv..AN SSSR. Ser. geog.
no.5:82-87. S-0 '60. (MIRA 13:10)

1. Institut geografii AN SSSR.
(Garm District--Geology, Structural) (Earth movements)

PIOTROVSKIY, Vladimir Vladimirovich; PODOBEDOV, N.S., prof., retsenzent;
BOGOMOLOV, L.A., dotsent, retsenzent; GELLER, S.Yu., doktor geograf.
nauk, retsenzent; BLAGOVOLIN, N.S., nauchnyy sotrudnik, retsenzent;
BOGDANOVA, N.M., nauchnyy sotrudnik, retsenzent; DOSKACH, A.G.,
nauchnyy sotrudnik, retsenzent; ZHIVAGO, A.V., nauchnyy sotrudnik,
retsenzent; RANTS MAN, Ye.Ya., nauchnyy sotruinik, retsenzent; NIKOLAEV,
N.I., prof., retsenzent; DOBROVOL'SKIY, V.V., dotsent, retsenzent;
VOSKRESENSKIY, S.S., red.; SHAMAROVA, T.A., red.izd.-va; PREYS, E.M.,
tekhn.red.

[Geomorphology and fundamentals of geology] Geomorfologija i osnovami
geologii, Riga, Izd-vo geodez.lit-ry, 1961. 283 p.

(MIRA 14:12)

1. Nachal'nik otdela geomorfologii Instituta geografii AN SSSR (for Geller).
2. Otdel geomorfologii Instituta geografii AN SSSR (for Blagovolin, Bogda-
nova, Doskach, Zhivago, Rantsman).
(Geomorphology) (Geology)

KANTSMAK, Ya.Ya., POGONIN, G.N.

First results of the geomorphological studies of recent lateral
crustal displacements along the Talas-Fergana fault in Central
Asia. Izv. AN SSSR. Ser. geog. no.5-72-78 p.0 '63. (MIRA 16:10)

1. Institut geografii AN SSSR.

RANTS MAN, Ye.Ya.

Quaternary horizontal shifts along the Talas-Fergana fault.
Dokl.AN SSSR 149 no.3:666-668 Mr '63. (MIRA 16:4)

1. Institut geografii AN SSSR. Predstavлено академиком I.P.
Gerasimovym.
(Karakul'dzha Valley—Geology, Structural)

L 09080-67 ENT(1) GW/GB
ACC NR: AT6022492

(A)

SOURCE CODE: UR/0000/05/000/000/0085/0089

AUTHOR: Kaletskaya, M. S.; Rakovets, O. A.; Rantseman, Ye. Ya.

ORG: none

TITLE: Legends for geomorphological maps of mountainous regions on the scale of 1:1,000,000 (based on Tien Shen, the Altai, and the Urals)

SOURCE: AN SSSR. Otdeleniye nauk o Zemle. Geomorfologicheskaya komissiya. Metodika geomorfologicheskogo kartirovaniya (Methods of geomorphological mapping). Moscow, Izd-vo Nauka, 1965, 85-89

TOPIC TAGS: geomorphology, cartography, topography, aerial photography

ABSTRACT: The authors emphasize the need for clear and consistent legends for geomorphological maps of vast mountainous regions and propose a legend which can be used to depict the morphology and development stage of the relief on a single map. The legend lists 10 basic stages in the development of the relief (I-Mesozoic, II-Cretaceous, III-Upper Cretaceous, IV-Paleogene, V-Neogene, VI-Pliocene Lower Quaternary, VII-Lower Quaternary, VIII-Middle Quaternary, IX-Upper Quaternary and X-Holocene) and three broad stages of development: Pre-Quaternary, Pre-Neogene, and Quaternary. Morphological types of relief are broken down into mountains, foothills, and plains between mountains and plains of large river valleys and subgrouping of these are given. Genesis of

Card 1/2

L 09080-67

ACC NR: AT6022492

plains is subdivided into depositional (alluvial, lacustrine, marine, pluvial, morainal, fluvio-glacial) and denudational (subaerial, abrasional). The use of colors in various shadings to depict altitude and relief features is also described. The authors note that in compiling a map according to the proposed legend, a number of key areas must be mapped on a scale of 1:100,000. Maps made according to this legend are useful in prospecting for minerals and in determining the degree of tectonic activity in a given area at a given stage of its development and in the study of the history of the formation of recent tectonic structures.

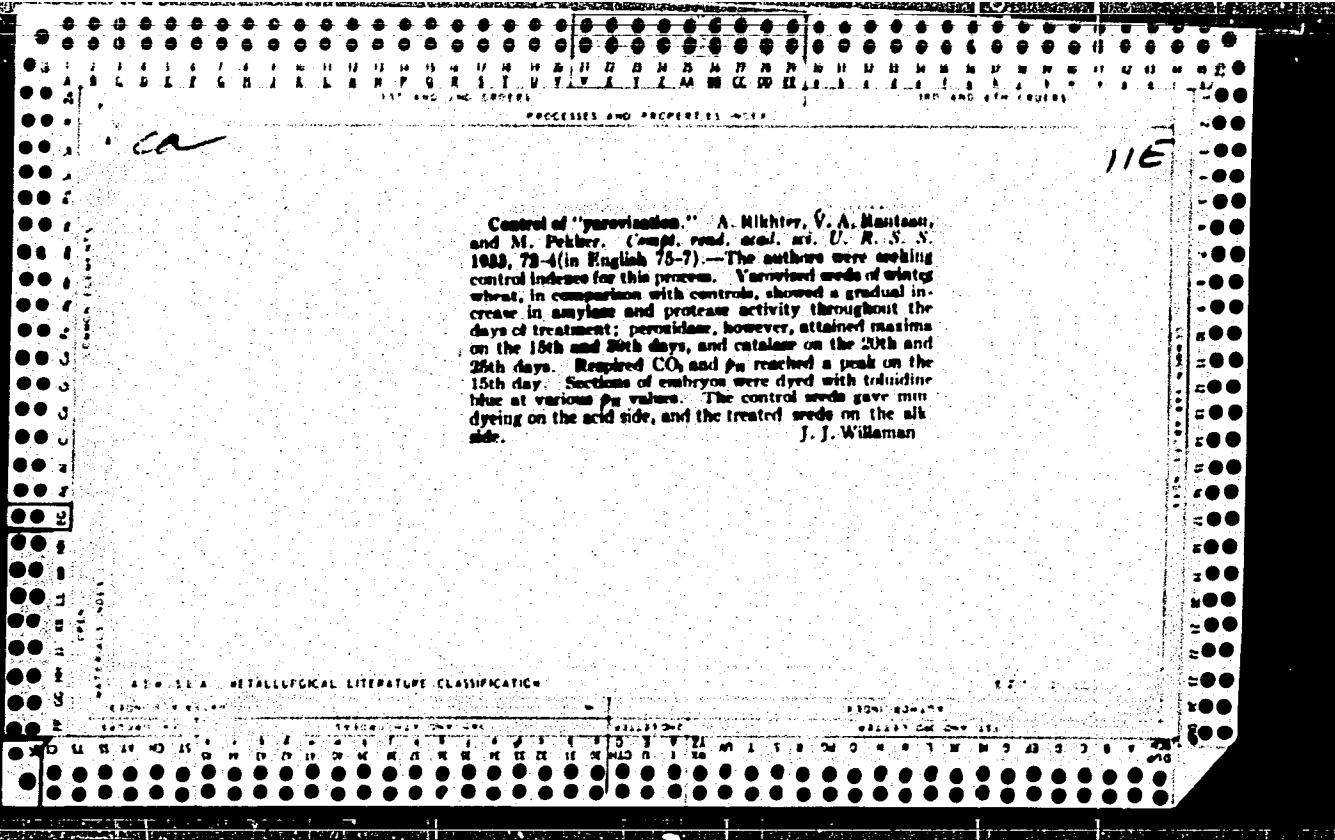
SUB CODE: 08/ SUBM DATE: 25Sep65

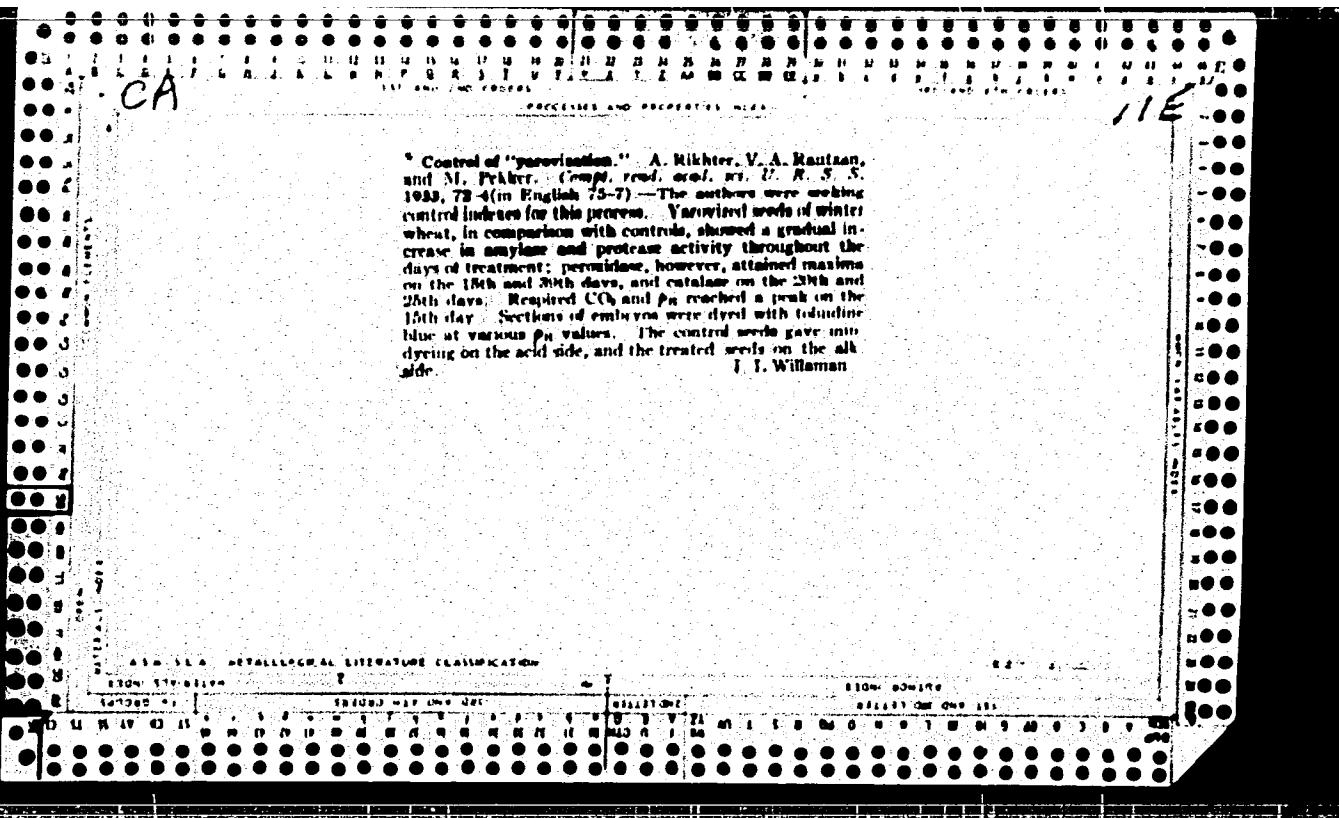
Card 2/2

GLUSHKOV, F.I., kand. tekhn. nauk; RAMTSUS, D.V., inzh.

Comparative evaluation of movable sprinklers. Gidr. i mel. 15
no.2:9-13 F '63. (MIRA 16:4)

1. Moskovskaya optychno-issledovatel'skaya dozhdedval'naya
stantsiya.
(Moscow Province—Sprinkler irrigation)





CZECHOSLOVAKIA / Chemical Technology. Chemical Products. H
Fats and Oils. Beeswaxes. Soaps. Detergents.
Surface-Active Agents.

Abs Jour: Ref Zhur-Khimiya, 1958, No 20, 68869.

Author : Rany M., Hrbek L.

Inst : Not given.

Title : Certain Conclusions Based on the Investigation of
Detergents Used for Washing and Cleaning in G.D.R.
(German Democratic Republic).

Orig Pub: Prumysl potravin, 1958, 9, No 2, Priloha, 1-9.

Abstract: Manufacture of synthetic detergents in GDR is
described.

Card 1/1

81

MILOSLAVSKIY V.K.; RANYUK, A.I.

Optical constants of cadmium oxide in the infrared spectra region.
Opt.i spektr. 11 no.4:536-541 O '61. (MIRA 14,15)
(Cadmium oxide--Optical properties)

BEREZHNOY, Yu.A.; KLYUCHAREV, A.P.; PANYUK, Yu.N.; RUTKEVICH, N.Ya.

Mechanism underlying total nuclear decay. Zhur. eksp. i teor. fiz.
45 no.4:1030-1035 O '63. (MIRA 16:11)

1. Fiziko-tehnicheskiy institut AN UkrSSR,

S/903/62/000/000/025/044
B102/B234

AUTHORS: Klyucharev, A. P., Rutkevich, N. Ya., Ranyuk, Yu. N.,
Bolotin, L. I., Kulygin, Yu. F., Revutskiy, Ye. I.

TITLE: Nuclear reactions induced by heavy ions

SOURCE: Yadernyye reaktsii pri malykh i srednikh energiyakh; trudy
Vtoroy Vsesoyuznoy konferentsii, iyul' 1960 g. Ed. by
A. S. Davydov and others. Moscow, Izd-vo AN SSSR, 1962, 329-333

TEXT: Nuclear photoemulsions НИКФИ (NIKFI) (type D) were irradiated by carbon (112 Mev) and beryllium ions (84 Mev) and then subjected to microscopic scanning. On the average 2200 Be ions (or 4400 C ions) were necessary for producing one star. A total of 130 stars due to Be and of 140 due to C ion bombardment were analyzed. The events may be attributed to two groups: collisions with light (C, N, O, H) and heavy (Br, Ag) nuclei, and among them to three groups: production of singly-, doubly, or multiply charged particles. Since it was not possible to identify the prongs the stars were analyzed on the basis of the particle evaporation from compound nuclei. The reaction products were alphas and protons with $\alpha/p = 10$ for light and $\alpha/p \approx 20$ for heavy nuclei. For C, N, O + C the main reactions were

Card 1/2

Nuclear reactions induced by heavy ions

S/903/62/000/000/025/044

B102/B234

2α , 3α , $p2\alpha$, αp , and α (enumerated according to decreasing probability) and for Br, Ag + C they were 2α , α , αp , 3α , p , $p2\alpha$; for C, N, O + Be they were 2α , α , 3α , $p\alpha$ and 5α (the latter two with equal probability) and for Br, Ag + Be 2α , α , $2p\alpha$, p . Also energy spectra and angular distributions were measured. The course of the latter indicates the considerable contribution made by direct processes. It could be shown that the six-pronged stars observed were formed by α -particles, the disintegration products of the carbon projectile. There are 7 figures.

ASSOCIATION: Fiziko-tehnicheskiy institut AN USSR (Physicotechnical Institute AS UkrSSR)

Card 2/2

5/05/62/043/004/012/061
2102/3160

AUTHORS: Berezhnoy, Yu. A., Klyucharev, A. P., Ranyuk, Yu. M.,
Mutkevich, N. Ya.

TITLE: Total nuclear disintegration reactions

PERIODICAL: Zhurnal eksperimental'noy i teoretičeskoy fiziki, v. 43,
no. 4(10), 1962, 1243 - 1252.

TEXT: In order to study the peculiarities of the alpha-group structure of light nuclei, the reaction $C^{12} + C^{12} \rightarrow 6\alpha$ was investigated with 300-400 μ НИКФИ-Д (NIKFI-D) photographic emulsions bombarded by carbon ions from the linear accelerator of the Khar'kovskiy fiziko-tehnicheskiy institut (Khar'kov Physico-technical Institute). Besides the alpha-particle energy and angular distributions, the excitation function (Fig. 4) was also measured from the threshold (designated by ∇) up to 115 Mev (laboratory system). The angular distribution of the alphas, given by $d\alpha/\sin^2\theta = f(\theta)$ is symmetrical with a flat minimum at 90° , the energy distribution, $d\alpha/dw = f(w)$, is shown in Fig. 3. These functions are calculated with the statistical model of Card 1/3.

5/05/62/042/004/019/061
3102/3100

Total nuclear disintegration ...

direct nuclear disintegration.

$$\frac{dn}{d\ln \theta d\theta} = \frac{N_0 e^{-u}}{\sqrt{2\pi \Gamma(1/2, u)}} \int_0^{u/2} \exp(x(1 + \cos^2 \theta)) I_0(x \sin^2 \theta) x^{1/2} dx. \quad (6)$$

$$\frac{dn}{du} = \frac{2\alpha N_0 u e^{-u}}{\sqrt{\pi \Gamma(3/2, u)}} e^{-2u} \int_0^{u/2} \operatorname{sh}\left(\sqrt{\frac{u}{\alpha}} \sin x\right) \cos^2 x dx. \quad (7)$$

tained using the notations from Fig. 5 and $N_0 = \int dn$, $u = \mu\beta^2 R^2/2\alpha$, μ is the α -particle mass, $w = p^2/2$, its energy and $m_z = p \sin \theta \cos(\psi - \phi)$ its angular momentum. The phenomenological constants α and β are determined from the total energy and the total momentum

$$E_0 = \frac{N_0 \Gamma(1/2, u)}{2\alpha \Gamma(3/2, u)}, \quad M_0 = \frac{2N_0 u}{3} \left[1 - \frac{\Gamma(5/2, u)}{4\Gamma(3/2, u)} \right]. \quad (4) \quad \Gamma(a, b) = \int_0^\infty e^{-bx} x^{a-1} dx.$$

$E_0 = \int_{-R}^R \min_z M_0 = \int_R^\infty m_z \operatorname{Im} \operatorname{erfc} \frac{z - Xu/4}{\sqrt{2}}, R$ is the radius of the effective volume. From the measurements $N_0 = 6$, $E_0 = 36$ Mev, $M_0 \approx 15$ and $R = 5$ fm were found, so that with (4) $1/\alpha = 2.3^\circ$ ster., $1/B = 1.2^\circ$ and $u = 2$ was obtained. The excitation

Card 2/3

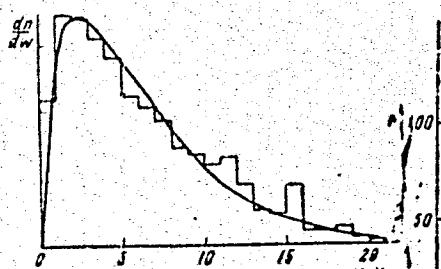
S/356/62/043/004/013/061
S102/S180

Total nuclear fission ...

tion curve was calculated with the Sachs formula (Phys. Rev. 103, 671, 1956). The theoretical results (solid lines in the diagrams) agree very well with the measured ones. There are 5 figures.

SUBMITTED: May 18, 1962

Fig. 3.



Card 3/3

Fig. 4.

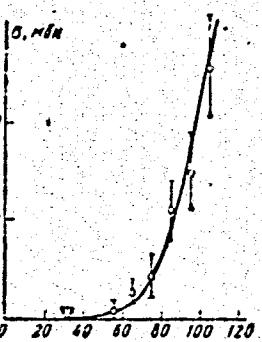
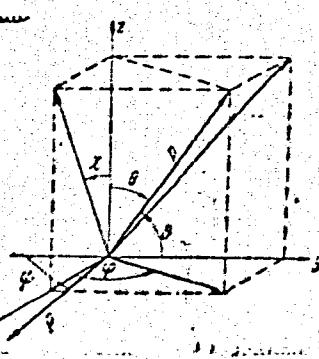


Fig. 5.



BOLOTIN, L.I.; KLYUCHAREV, A.P.; KULYGIN, Yu.F.; RANYUK, Yu.N.;
REVUTSKIY, Ye.I.; RUTKEVICH, N.Ya.

Interaction between the ions of carbon and the nuclei of the
photoemulsion. Izv. AN SSSR Ser. fiz. 24 no.12:1502-1504 D '60.
(MIRA 13:12)

1. Fiziko-tehnicheskiy institut AN USSR.
(Photography, Particle track)
(Carbon)

L 29419-66 EWT(1) WW
ACC NR: AR5020402

SOURCE CODE: UR/0124/65/000/008/B051/B052

AUTHOR: Rao, G.

45.
B

TITLE: A short diffuser for testing rocket nozzles

SOURCE: Ref. zh. Mekhanika, Abs. 8B348

REF SOURCE: Sb. Issled. raketn. dvigateley na tverdom toplive. M.,
Izd-vo Mir, 1964, 62-65

TOPIC TAGS: diffuser, diffuser design, test method, nozzle diffuser,
nozzle flow

ABSTRACT: The results are given of experimental studies connected with the development of a shortened supersonic diffuser intended for testing rocket nozzles. The diffuser under examination is of an axially symmetrical construction consisting of two short conical sections (one narrowing and one widening) with a cylindrical insertion between them (the relative length of this cylindrical section is approximately one caliber). With the help of this diffuser a small rocket engine with a profiled reactive nozzle and an expansion ratio of 20:1 was tested. It was noted that the diffuser allowed a successful test of the engine during an uninterrupted flow in the nozzle and

*[NOTE: publ. of world literature. AUTHOR IS PROBABLY ASSOCIATED
Card 1/2 WITH WESTERN/U.S. FACILITIES]

L 29419-66

ACC NR: AR5020402

a nominal pressure in the combustion chamber. During the test the summary length of the diffuser was only 1.9 times larger than the diameter of the nozzle shear, and the pressure in the combustion chamber was 1 $\frac{1}{4}$ ata. Yu. A. Lashkov.

SUB CODE: 21 / SUBM DATE: none

Card 2/2 (C)

L 09165-67
ACC NR: APT002302

SOURCE CODE: UR/0070/66/011/002/0171/0174

27

AUTHOR: Eao, S. T.

ORG: Institute of Crystallography, AN SSSR (Institut kristallografi AN SSSR);
Madras University, India

TITLE: Crystalline structure of D-leucyl-glycine hydrobromide

SOURCE: Kristallografiya, v. 11, no. 2, 1966, 171-174

TOPIC TAGS: crystal structure, least square method

ABSTRACT: Preliminary data are given on the crystalline structure of $C_8N_2O_3H_{15} \cdot HBr$. The structure is determined on the basis of the heavy atom method with subsequent use of two- and three-dimensional data and refinement of results by the least-squares method. The divergence factor, found from the experimental deviations from zero was 15.7%. The packing of molecules in the crystal is described briefly and further refinement of the structural description is anticipated.

The author thanks Prof. G. N. Ramachandran for stating the problem, Prof. B. K. Vaynshteyn for interesting discussions, and V. I. Simonov for assistance in the problem. The author also thanks UNESCO for financial assistance in travel to the USSR and living expenses during his stay.

Orig. art. has: 1 figure and 1 table. [JPRS: 36,362]

SUB CODE: 20 / SURM DATE: 18May65 / ORIG REF: 002 / OTH REF: 002

not

REF: 51.8.737

0125 0575

L 09165-67
ACC NR: AF7002302

SOURCE CODE: UR/0070/66/011/002/0171/0174

AUTHOR: Rao, S. T.

28

ORG: Institute of Crystallography, AN SSSR (Institut kristallografii AN SSSR);
Madras University, India

TITLE: Crystalline structure of D-leucyl-glycine hydrobromide

SOURCE: Kristallografiya, v. 11, no. 2, 1966, 171-174

TOPIC TAGS: crystal structure, least square method

ABSTRACT: Preliminary data are given on the crystalline structure of $C_8N_2O_3H_{15}\cdot HBr$. The structure is determined on the basis of the heavy atom method with subsequent use of two- and three-dimensional data and refinement of results by the least-squares method. The divergence factor, found from the experimental deviations from zero was 15.7%. The packing of molecules in the crystal is described briefly and further refinement of the structural description is anticipated.

The author thanks Prof. G. N. Ramachandran for stating the problem, Prof. B. K. Vaynshteyn for interesting discussions, and V. I. Simonov for assistance in the problem. The author also thanks UNESCO for financial assistance in travel to the USSR and living expenses during his stay.

Orig. art. has: 1 figure and 1 table. [JPRS: 36,362]

SUB CODE: 20 / SUBM DATE: 18May65 / ORIG REF: 002 / OTH REF: 002

Card 1/1 last

UDC: 548.737

0925

057A

GOREVAN, V. A., BAG, S. V. N.

Magnetic field due to singularities in a thin layer of variable thickness. Dokl. AN SSSR 164 no.5:977-1000. 0.165.

(MIRA 18:10)

I. V. Klyushkin, energeticheskij in-titut. Submitted March 3, 1965.

STAUD, Miloslav; RAOIG, Miloslav; SIR, Emanuel; SKARVADA, Ales

Hydrogenation of Romashkino crude oil. Kope a ublie 5 no. 7
205-208 JI'63.

1. Vyzkumny ustav Kralovopolske strojirny, zavody chemickych
zarizeni, n.p., Brno.

RAOKIN, E. B.

22734 Raokin, E. B. I Sokolova, E.G.K. Meklanizmu Priooretennoi
Patologii Tsvetnoto Zreniya. Trudy Akad. Med. Nauk SSSR, T. IV,
1949 S. 51-56 Bioliogr: 8 Nazv.

So: Letopis', No. 30, 1947

RADS, Ante

Yugoslav electric power industry and its possibilities of
cooperation with Austria. Elektroprivreda 14 no.10:512-516
0 '61.

I. Generalni direktor Zajednice jugoslovenske elektroprivrede,
Beograd.

RAPACKI, H.

Rapacki H. Fundamental Principles of Designing Metal Moulds.
"Podstawowe zasady konstruowania form metalowych (kokill)".
Przegląd Odlewnictwa, No. 6, 1954, pp. 162-172, 18 figs., 5 tabs.
Advantages of casting metals in metal moulds; adaptation of the
design of castings to metal moulds; selection of the type of moulds; ac-
commodation of the casting in metal moulds; runner system; method of
evacuating air and gases; principal mould sizes; the use of metal and
sand cores; materials used in the construction of metal moulds.

MG

Df

DEC, Jerzy; DREJAK, Zdzislaw; RAPACKI, Henryk; SZYM CZYK, Wislawa

A safe for storing radium preparations. Nowotwory 12 no.3:261-263
'62.

I. z Instytutu Onkologii -- Oddzial w Krakowie Dyrektor: doc. dr
med. H. Kolodziejska I z Instytutu Fizyki Jadrowej w Krakowie Dyrektor:
prof. dr H. Niewodniczanski.

(RADIATION PROTECTION) (RADIIUM)

DREJAK, Zdzislaw; PAWELECZYK, Jan; RAPACKI, Henryk; SZYMCZYK, Wislawa

A protective table in the radium application room. Nowotwory 12
no.3:257-259 '62.

1. z Instytutu Onkologii -- Oddzial w Krakowie Dyrektor: doc. dr med.
H. Kolodziejska I z Instytutu Fizyki Jadrowej w Krakowie Dyrektor:
prof. dr med. H. Niewodniczanski.
(RADIATION PROTECTION) (RADIIUM)

DREJAK, Zdzislaw; RAPACKI, Henryk; SZYMCZYK, Wislawa

A container for radium applicators. Nowotwory 12 no.3:265-267
'62.

I. Z Instytutu Onkologii — Oddzial w Krakowie Dyrektor: doc. dr med.
H. Kolodziejska I Z Instytutu Fizyki Jadrowej w Krakowie Dyrektor:
prof. dr H. Niewodniczanski.
(RADIMUM) (RADIATION PROTECTION)

GROTOWSKI, Kazimierz; RAPACKI, Henryk; SLAPA, Mieczyslaw

The inert gas purifier. Nukleonika 6 no.7/8:517-522 '61.

I. Polish Academy of Sciences, Institute of Nuclear Physics, Krakow.

IEC, Jerzy; RAPACKI, Henryk; STARZEWSKI, Jerzy; STRONSKI, Ignacy

Automatic device for column chromatography. Nukleonika 7
no.11:734-737 '62.

1. Instytut Fizyki Jadrowej, Polska Akademia Nauk, Krakow.

R/PAK/1 11.

5763

621.744.343.001.5:621.744.5

5 4E12

Rapacki H. Technological Conception of Shell Moulding.¹⁸
„Konsepcja technologiczna formowania skorupowego”. Przegląd
Odlownictwa, No. 4, 1958, pp. 88—106, 6 figs., 1 tab.

Directions concerning the design of casting with a view to adapting design to the technology of shell moulding. Examples of eliminating cores and loose pieces of pattern due to the introduction of changes in the casting design. The allowances for machining the casting can be considerably reduced in shell moulded casting, and sometimes completely eliminated, by dimensional accuracy, surface smoothness and the possibility of applying minimal casting drafts. Directions concerning elaboration of the technological conception of producing shell moulds and cores. The following problems are considered: the selection of the parting surface of the mould; the position of the casting in the moulds, and the positioning of the parting surface of the mould during pouring. Shell moulds can be poured with both a horizontal and a vertical parting surface of the mould; however, if possible, vertical positioning of the parting line should be aimed at. Directions for establishing the design and dimensions of shell moulded cores. If, in consequence of a very intricate core design, production as a whole presents certain difficulties, it can be divided into several simple cores. Different types of gating systems employed in shell moulding are discussed. In view of the lower resistance of shell moulds as compared with moulds from ordinary moulding sands, the sections

TECHNOLOGICAL CONCEPTION OF . . .
of the elements of the gating system can be slightly smaller. A high
pouring velocity, especially in moulds with a vertical parting surface
and a considerable degree of smoothness in shell moulds does not
favour the retention of slag in the gating system; therefore there
somewhat frequently arises the necessity for skinners. The technologi-
cal conception constitutes a fundamental base for designs of a pattern
assembly for shell moulding.

21.4.200

26834
P/048/61/006/007/006/008
D249/D302

AUTHORS:

Grotowski, Kazimierz, Rapacki, Henryk, and Słapa,
Mieczysław

TITLE:

The inert gas purifier

PERIODICAL:

Nukleonika, v. 6, no. 7-8, 1961, 517-522

TEXT: This is a description of a simple apparatus, working on the principle of thermal circulation, for producing pure inert gases suitable for nuclear detector devices. Small amounts of N₂ and CO₂ are usually harmless, but electronegative gases like O₂, H₂O or Cl₂ must be removed. The commonest methods of purification are listed as: (1) absorption in an activated charcoal trap at low temperatures (for He and Ne only); (2) removal of O₂ by liquid sodium; (3) circulation over heated metallic Ca, possibly with admixtures of Mg, Cu or U. The latter method removes up to several percent of O₂ and is capable of continuous operation. Methods (1) and (3) have been used at the Cracow Center of Nuclear Physics. The thermal circulation

Card 1/5

The inert gas...

2683
P/046/61/006/007/006/008
D249/D302

apparatus (of G1. capacity) is shown in Fig. 1. The gas circulates through a steel column (1) containing a number of copper trays (2) holding Ca and Mg shavings, through horizontal pipes (3,4), valves (5,6,7,8) and a detector (9). A manometer (10) and vacuum gauges (11) are provided. The trays, which are perforated to facilitate gas flow, are held in good thermal contact with the wall by means of phosphor-bronze springs. The filter column itself is heated with a W resistance element (15), wound non-uniformly to give even distribution of temperature, measured with a resistance thermometer (18) which is connected to a thermoregulator (19). The apparatus, which may be used at up to 10 atm., must be thoroughly out-gassed by flushing with argon at a few atmospheres for 5 hours and pumping out before operation. The degree of purification depends on the filter temperature, time of purification, gas pressure and the absorbing metals. The effects of these 4 parameters were investigated with a grid ionization chamber. For high concentrations of impurities, it is sufficient to measure the pulse amplitude as a function of the purification time at a constant temperature. Pulse height increases with increasing purity of the gas to a maximum of 99.99%. To assess higher purities, it is necessary to measure the pulse height v. voltage applied on the chamber when a plateau is reached at 99.99%. [Abstractor's note: Figures given appear inconsistent]. The grid

Card 2/5

26834

The inert gas...

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D249/D302

consisted of two 0.09 mm W wires spaced 2.1 mm apart, mounted 49 and 10 mm from the anode and the collector respectively. 6% resolutions were obtained with this apparatus for α -particles from natural U (4.20 and 4.76 Mev). Using Ca filters and commercial argon at 3 atm., the purifications were attained after \sim 1 hr. at 320°C, \sim 2½ hrs. at 280°C and \sim 5 hrs. at 250°C. Lower purity was achieved at 210°C under the same conditions. Using Ca 10% Mg in filter trays at the same pressure of argon, the purifications required \sim 1½ hrs. at 250°C and \sim 3 hrs. at 210°C. The measurements with argon at 0 atm. showed that the time of purification (\sim 3½ hrs.) is roughly proportional to the gas pressure. The temperature and filter material used in the last experiment are not given. The amount of used Ca was 22 gr. [Abstractor's note: Presumably per operation]. The authors express their gratitude to Professor H. Niewodniczański and to A. Budzanowski and Z. Wróński for their support and assistance. There are 8 figures and 4 references: 2 Soviet bloc and 2 non-Soviet-bloc. The 2 references to English-language publications read as follows: U. Facchini and A. Helvicin, Nucleonics, 13, 36 (1955); L. Herwig, G. Miller and N. Utterback, Rev. Sci. Inst., 26, 929, (1955).

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The inert gas...

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Cracow

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Fig. 1. Diagrammatic sketch of the inert gas purifier
1: a filter column; 2: trays with calcium splints; 3,4: horizontal pipes;
5,6,7,8: valves; 9: detector; 10: manometer; 11: vacuum gauge; 12: central
rod; 13: upper lid; 14: copper sealing; 15: heater; 16: asbestos thermal
isolation; 17: steel protector; 18: resistance thermometer; 19: thermoregu-
lator; 20,21: water-cooling connections.

Card 4/5

RAPICZ, J.

J. Rapicz* and S. Dubiski**, "Serological Test for Determination of Parentage in Cattle," Nature, Vol. 182, No. 443, 29 Oct 58, p. 1176.

Received 8 Jul 58.

*Published from the Higher School of Agriculture, Department of Cattle Breeding, Krakow, al. Mickiewicza 21.

**Published from the Szlask Medical Academy, Research Laboratory of Microbiology, Lubrza-Rokitnica.

RAPAVIC, MIKICA.

Organizacija poljoprivrede u Narodnooslobodilackoj borbi 1941-1945.
Materijali za historiju poljoprivrede FNRJ. Poljoprivredni i veterinarski
strucnjaci u Narodnooslobodilackoi borbi u Hrvatskoj. Zagreb.
Poljoprivredni nakladni zavod, 1955. 229 p. (Organization of
agriculture in the National Liberation War, 1941-1945; materials for the
history of the agriculture of Yugoslavia. Argicultural and veterinary
specialists in the National Liberation War in Croatia. Illus., Ports., map,
bibl., facsimis., footnotes, tables)

GEODETSKI LIST. (Drustvo geodeta Hrvatske)

Zagreb, Yugoslavia

Vol. 13, No. 7/9, July/Sept. 1959.

Monthly list of Eastern European accession Index (FEII) in vol. 3, No. 11
November 1959
Incl.

YUGOSLAVIA/Cultivated Plants. General Problems.

Abs Jour : Ref Zhur-Biol., No 15, 68066

Author : Rapajic, Nikola

Inst :

Title : Agricultural Systems and Types on the Southern Dalmatian Terraces.

Orig Pub : Agron. Glasnik, 1957, 7, No 7-8, 257-270.
Discussion, 271

Abstract : No abstract.

Card : 1/1

RAPAJIC, Vladeta, oklevetna mernok

The Danube-Tisza-Danube Canal is under construction in
Voivodina. Elet tud 19 no.21:1003 22 My '64.

I. Danube Committee.

SHVACHKIN, Yu.P.; AZAROVA, M.T.; KAPANOVICH, I.I.

Interaction of uracil with derivatives of acrylic acid. Vest.
Mosk. un. Ser. 2: Khim. 18 no.5:68-69 S.O '63. (MIRA 16:11)

1. Kafedra organicheskoy khimii Moskovskogo universiteta.

Reaction of α -bromoacetyl with acrylonitrile. Part 2
Sur. R.; Khim. ZN no.1:73-75 34-5 Ind.
1. Kafedra organicheskoy khimii Moskovskogo universiteta.

RIPANT, V.

"The Mastinal Tumor in Children." (University Surgical Clinic, Immetz).

SO: Fed. Listy, Prague, Vol. 3 (1953), No. 6, pp. 307-313.

RAPANT, V.

Venography of the portal system by introduction of contrast media into
the spleen. Cas. lek. cesk. 92 no.19:523 8 May 1953. (CIML 24:5)

RAPANT, Vladislav, prof. MUDr.

Prevention of cancer of the stomach and cardia. Cesk.onkol. 2
no.2-3:232-252 1955.

1. Chirurgicka klinika PU v Olomouci.
(STOMACH, neoplasma,
prev.)

EXC. ACTA MEDICA Sec. 9 Vol. 11/7 Surgery July 1957
RAPANT V.

3736. RAPANT V., DOUBRAVSKÝ J., KOJECKÝ Z., PODIVÍNSKÝ R. and WIEDERMANN B. Chir. a Interi. Kat. I.6k. Fak. Palackého Univ., Olomouc. Náhrada žaludku jejunální kličkou po radikálních totálních gastrektomích pro rakovinu žaludku a kardie. Studie chirurgická, roentgenologická, metabolická, hematologická. Substitution of the stomach by a jejunal loop in surgery of carcinoma of the stomach and cardia. ACTA UNIV. PALACK. OLOMUCENSIS 1955, 7 (5-56) Graphs 34 Tables 10 Illus. 10

If, for the time being, cancer of the stomach and cardia can be controlled solely by surgery, the surgeon must not fail to take into consideration the quality of post-operative life, especially that following radical total gastrectomy. The reasons for substitution of the stomach are outlined and indications of this procedure are enumerated. The substitution of the stomach by jejunum is indicated in those cases in which gastrectomy may be assumed to be curative. The operative technique is briefly described and the results achieved in 8 cases thus treated, of which 7 survived the operation, are evaluated. Of these 7 patients the average survival period was 15 months; one died of metastases after 16 months. The remainder show a gain of weight averaging 6 kg., are free from signs of regurgitation oesophagitis and only 2 of them have mild signs of dumping. X-ray examination has revealed moderate dilatation of the interposed jejunum, the tonus of which is reduced, and only slight regurgitation into the oesophagus. The study evidences the advantages of interposition of the jejunum between the oesophagus and duodenum, especially from the standpoint of protein and fat utilization. In the last part of the study the haematological changes in patients with a survival time of at least 6 months are studied. The interposition is of no effect in preventing macrocytic megaloblastic anaemia, which appears one to several years after total gastrectomy.

Rapant - Olomouc (IX, 5, 16)

RAPANT, Vladislav, prof. Dr.

Substitution of the stomach following total gastrectomy and subtotal resection of the stomach for carcinoma by bilateral exclusion of the jejunal loop. Rozhl.chir. 34 no.6:321-330 June 55.

1. Z chirurgicke kliniky FU v Olomouci; prednosta prof. Dr. V.Rapant.

(STOMACH, neoplasms

surg., gastrectomy & form. of substitute stomach from
jejunum)

(JEJUNUM, surgery

form. of substitute stomach after gastrectomy for cancer)

RAPANT, V.; KOJECEY, Z.; PODIVINSKY, R.

Radical total gastrectomy with interposition of a jejunal loop
in carcinoma from the aspect of late results. Rev. Czech. H.
2 no.3:255-260 1956.

I. Department of Surgery (Director: Prof. V. Rapant) and
IIInd Department of Medicine Acting Director: Doc. Z. Kojecky,
Palacky University, Olomouc.

(STOMACH NEOPLASMS, surg.

total gastrectomy with interposition of jejunal loop,
late results)

(JEJUNUM, surg.

interposition of jejunal loop in total gastrectomy for
cancer, late results)

RAPANT, Vladislav, Prof., MUDr.; SERY, Zdenek, MUDr.; DOUBRAVSKY, Jaroslav, MUDr.

Resection of thoracic esophagus for carcinoma concurrent with idiopathic dilatation of esophagus. Rozhl. chir. 35 no.4:205-208 Apr 56.

1. Chirurgicka klinika Palackeho university (prednosta prof. MUDr. Vladislav Rapant) a Ustredni rentgenologicky ustav KUMZ (prednosta prim. MUDr. Ignac Stratil) v Olomouci. K sedesatinam prof. Dr. V. Vejdovskeho.

(ESOPHAGUS, neoplasms
with idiopathic dilation of esophagus, surg. (Cz))